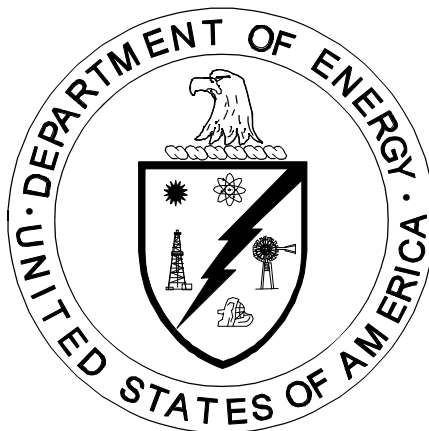


**Oak Ridge Operations Office
Environmental Management**

**Accelerating Cleanup:
Focus on 2006**

Discussion Draft

June 1997



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ABBREVIATIONS

ALARA	as low as reasonably achievable
BCV	Bear Creek Valley
BEMR	Baseline Environmental Management Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CH	contact handled
CROET	Community Reuse Organization of East Tennessee
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy—Headquarters
DOE-ORO	U.S. Department of Energy—Oak Ridge Operations Office
ER	environmental restoration
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
ETTP	East Tennessee Technology Park
FFA	Federal Facility Agreement
FFCA	Federal Facility Compliance Agreement
FS	feasibility study
FY	fiscal year (October–September)
HSWA	Hazardous and Solid Waste Amendments of 1984
ITO	Incentive Task Order
LDR	land disposal restrictions
LI & OE	line item and operating expenses
LLLW	liquid low-level waste
LLW	low-level waste
M&I	management and integrating
M&O	management and operating
MEM	Management Evaluation Matrix
MW	mixed waste
ND	non-Defense
NFA	No Further Action
MLLW	mixed low-level waste
MSRE	Molten Salt Reactor Experiment
NEPA	National Environmental Policy Act
NMFS	Nuclear Materials and Facilities Stabilization
NTS	Nevada Test Site
OBS	Operations Office Baseline Summary
OHF	Old Hydrofracture Facility
ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
PA/SI	preliminary assessment/site investigation

PBS	Project Baseline Summary
PGDP	Paducah Gaseous Diffusion Plant
PORTS	Portsmouth Gaseous Diffusion Plant
RA	remedial action
RCRA	Resource Conservation and Recovery Act
RH	remote-handled
RI	remedial investigation
RI/FS	remedial investigation/feasibility study
ROD	Record of Decision
S&M	surveillance and maintenance
SBS	Site Baseline Summary
SNF	spent nuclear fuel
STP	Site Treatment Plan
SSAB	Site-Specific Advisory Board
SWMU	solid waste management unit
SWSA	solid waste storage area
TCE	trichloroethylene
TCLP	toxicity characteristic leaching procedure
TDEC	Tennessee Department of Environment and Conservation
TRU	transuranic
TSCA	Toxic Substances Control Act
TWTP	TRU Waste Treatment Project
USEC	U.S. Enrichment Corporation
UEFPC	Upper East Fork Poplar Creek
WAC	waste acceptance criteria
WAG	waste area grouping
WETF	West End Treatment Facility
WIPP	Waste Isolation Pilot Plant
WOC	White Oak Creek
WSS	Weldon Spring Site (Missouri)
WSSRAP	Weldon Spring Site Remedial Action Project

GLOSSARY

\$6 Billion Case: the high funding scenario for the DOE National Environmental Management Program for accelerating cleanup by the year 2006.

\$5.5 Billion Case: the low funding scenario for the DOE National Environmental Management Program for accelerating cleanup by the year 2006.

Baseline Environmental Management Report (BEMR): a national report prepared in response to a congressional mandate made in the 1994 National Defense Authorization Act to estimate the total cost of the Environmental Management Program.

Brownfield: contaminated industrial/commercial land to be returned to productive use (not greenfield conditions).

Environmental Management (EM): the DOE program encompassing environmental restoration, waste management, nuclear material and facility stabilization, and technology development.

Greenfield: land that has not been industrialized or developed.

Landlord: The program which maintains existing site infrastructure and provides the necessary upgrades to accomplish future goals and objectives.

Mortgage Reduction: In the context of this plan, mortgage reduction is a variance analysis technique in which the present values of alternative scenarios are analyzed.

national dialogue: refers to national communication with stakeholders.

Nuclear Materials and Facilities Stabilization (NMFS): a program within the EM Program whose mission is to (1) reduce the high-risk conditions associated with unstable, excess nuclear and chemical materials left intact at former nuclear weapons production facilities and (2) reduce the maintenance costs associated with facilities awaiting decommissioning or final disposition.

privatization: an acquisition strategy providing alternative methods for accelerating cleanup and reducing cost through competition, private financing, and the use of private-sector technology and expertise.

rebaselined: significantly changing the scope, schedule, and cost of the program/project and obtaining approval of the changes through the baseline change control process.

Reindustrialization: to make available to the private sector underutilized buildings, facilities, and land through leases and other mechanisms.

subprojects (formerly the project level): discrete activities with defined scopes of work, schedules, and cost estimates for the performance of the work.

transuranic (TRU) waste: waste contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay without regard to source or form. Mixed TRU waste is also included in this definition.

1. ACCELERATING CLEANUP

1.1 STRATEGIC PLAN

This document presents the U.S. Department of Energy–Oak Ridge Operations Office (DOE-ORO) Environmental Management (EM) Accelerating Cleanup Discussion Draft for EM activities at DOE-ORO sites. In keeping with DOE’s commitment to responsibly accomplish the EM mission, DOE-ORO established the following process and resultant strategy to successfully achieve the EM mission.

The total life cycle effort needed to complete the present DOE-ORO EM mission was determined and categorized in terms of mission impact, risk reduction, mortgage reduction, regulatory compliance, and logical work progression (e.g., clean up source term first). Screening was conducted that (1) put early priority on reduction of high-risk, high-mortgage and/or tasks that must be completed before other work can proceed; (2) placed moderate-risk reduction and logically situated tasks from the middle to the end of the accelerating cleanup timeframe; and (3) deferred the start of low-risk reduction, low-mortgage reduction tasks and dependent activities toward the end of the life cycle.

The DOE-ORO EM Discussion Draft addresses activities at eight primary sites. Table ES.1 lists the sites included in this plan.

**Table 1.1. Oak Ridge Operations sites
(excluding the Formerly Utilized Sites Remedial Action Program)**

City, state	Site
Oak Ridge, TN	East Tennessee Technology Park (formerly the Oak Ridge K-25 Site) Oak Ridge Y-12 Plant Oak Ridge National Laboratory Oak Ridge Reservation Boundary Sites Oak Ridge Reservation off-site (nonfederal) areas
Paducah, KY	Paducah Gaseous Diffusion Plant
Portsmouth, OH	Portsmouth Gaseous Diffusion Plant
St. Charles, MO	Weldon Spring Site

The activities involved at the sites to reach each site’s potential future use are the EM Program scopes of work (described in Appendix A). In general, the scope includes environmental restoration (ER), waste management, and Nuclear Materials and Facilities Stabilization (NMFS) at the sites listed in Table 1.1, and landlord/infrastructure responsibilities at the East Tennessee Technology Park (ETTP).

This plan provides for the accelerated completion of selected projects, which will result in a long-term cost savings through mortgage reduction. ETTP will be reindustrialized (i.e., will be occupied and operated primarily by private companies). The EM presence at ETTP will be limited long-term environmental monitoring. Privatization will be an integral part of the EM Program. The on-site waste management facility will be operational. The watershed approach will be implemented for the ORR. Waste generators will assume responsibility for managing newly generated waste. Aggressive, enhanced performance goals will be realized.

Figure 1.1 illustrates the process used for developing the plan. The central theme of the process is identifying and achieving clearly defined end states for excess nuclear material, surplus nuclear facilities, waste management, and ER. The work required to achieve these end states was segregated into subprojects, which are rolled up to the project level. Subprojects were then ranked based on risk to the public, risk to site personnel, environmental protection issues, compliance issues, impact to mission, impact on mortgage reduction, and logical flow of events.

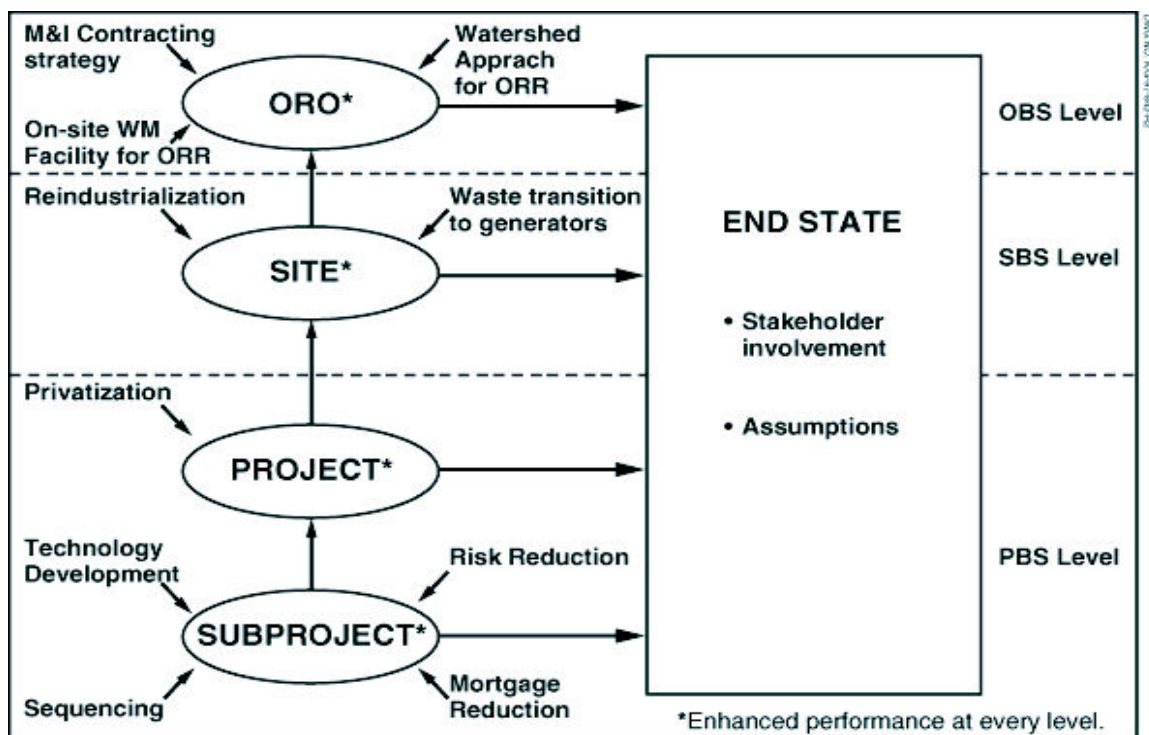


Fig. 1.1. Planning process for accelerating cleanup.

To accomplish the Discussion Draft, a new contracting strategy using a management and integrating (M&I) contractor will be employed (excludes Weldon Spring). Privatization projects were identified for scopes of work that could be transitioned to private enterprises. Reindustrialization was chosen as the most efficient method for accomplishing ETTP decontamination and decommissioning (D&D). Technology development needs were identified and incorporated along with anticipated cost

avoidance resulting from implementation. Plans for transitioning newly generated waste back to the generators were established.

Stakeholder involvement is central to the planning process. Stakeholder issues have been identified and action plans prepared to resolve most issues. Safety and health is an integral part of planning and performing the work necessary to complete projects.

This Discussion Draft reflects the \$6B funding case. DOE-ORO, the sites within its jurisdiction, and the scope of work for projects/subprojects are specifically described in the Operations Office Baseline Summary (OBS), the Site Baseline Summaries (SBSs), and the Project Baseline Summaries (PBSs), respectively.

1.1.1 Vision

DOE-ORO's vision for the sites under its jurisdiction is that they become "an integrated science, education, and technology complex operating in partnership with the private sector and supporting regional and national economic success toward a sustainable future." This vision is composed of the following three major components:

- revitalization of the scientific infrastructure at Oak Ridge National Laboratory (ORNL),
- responsiveness of national security operations at the Oak Ridge Y-12 Plant to the challenges presented by a small enduring weapons stockpile, and
- timely resolution of legacy hazards through reindustrialization, privatization, and reduction of the federal footprint at ETP.

The vision will be accomplished through the following:

- enhanced assessment and remediation strategies (e.g., watershed approach, focused assessments, on-site remedies);
- use of reindustrialization to accomplish site D&D;
- use of innovative technologies;
- accelerated disposal of inventoried waste;
- shared use of waste treatment and disposal capabilities;
- reduced cost of on-site treatment and storage;
- limited institutional control;
- aggressive enhanced performance, and
- cross-complex integrations of talents, functions, and facilities.

DOE-ORO will implement this vision in collaboration with regulatory agencies and stakeholders and other DOE sites across the national complex.

1.1.2 Objectives

The DOE-ORO EM Program vision will become a reality by achieving the following:

- ensuring that risk to the public, on-site workers, and the environment is lowered and maintained at acceptable levels by removing or controlling current and potential future contaminant sources;
- delineating clean areas and remediating legacy hazards to reduce the federal “footprint,” thus allowing reindustrialization and beneficial reuse;
- storing, treating, and disposing of legacy and newly generated waste in a safe, compliant, and cost-effective manner;
- facilitating pollution prevention and waste minimization; and
- minimizing costs for monitoring, maintenance, and institutional controls for contaminated sites and facilities.

Groundwater, surface water, and soil contamination will be remediated to a level consistent with future use of sites in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act (RCRA). Buildings suitable for potential reuse will be decontaminated consistent with their intended use, and buildings that pose an unacceptable risk or are unsuitable for reuse will be demolished.

1.2 SITE FUTURE USE/PROJECT END STATES

The identification of the appropriate future use for areas currently controlled by DOE is the first step in the cleanup process to meet the ORO EM Program objectives. Once the future use is identified, a set of criteria needed to meet the future use categories can be determined. Generally, human health and environmental risk assessment, as defined by the U.S. Environmental Protection Agency [(EPA) Risk Assessment Guidance for Superfund] has been used for the determination of appropriate cleanup levels to meet end-state requirements. These risk-based remedial goal objectives are then the basis for the selection of remedial actions that define project scope, schedule, and cost.

1.2.1 Future Use

Specific future use categories for each site are shown in Table 1.2. The categories shown are consistent with the Discussion Draft guidance (dated December 20, 1996). The future use assumptions described in Table 1.2 are for planning purposes only. An effort is currently underway to strengthen the future use assumptions through a process of stakeholder involvement. It should also be noted that actual future use objectives will be identified through watershed or project Records of Decision (RODs).

Table 1.2 Future land use categories

Site	Future use ^a
ORR	Controlled access (waste management areas), industrial, open space (conservation areas)
ORR Off-Site	Industrial, recreational (conservation areas)
PGDP	Industrial, recreational
PORTS	Industrial, recreational
Weldon Spring	Unrestricted or recreational use

^aFor the ORR, the future use categories in parentheses are as shown in the Management Action Process Document.

1.2.2 End States

This section summarizes the end states upon which the Discussion Draft is based. Status/accomplishments reached at the conclusion of the planning period are defined as the end state. End-state goals are discussed in the following sections. SBSs and PBSs give specific end-state details for each project.

1.2.2.1 ORR Project End States

A majority (96%) of the Oak Ridge Reservation (ORR) will not require institutional controls and will be available for a wide variety of conservation and industrial uses. At the ORR end state, the reservation is expected to be composed of approximately 4% waste management areas, approximately 21% industrial areas, and approximately 75% conservation areas. For the \$6B Case, the ORR end state will be achieved in Fiscal Year (FY) 2012. Appendix A presents end states for ORR remediation subprojects.

1.2.2.1.1 Y-12 Plant end states

Proposed future uses for the Y-12 Plant are waste management, conservation, and industrial. Projects/subproject end states for the Y-12 Plant will meet these future uses. Limited long-term monitoring will be required.

The proposed end states for the Upper East Fork Poplar Creek Watershed (the main Y-12 Plant area) support areas on Chestnut Ridge and the Bear Creek Watershed are controlled access and industrial use. DOE will maintain restricted access areas for secure storage and disposal of nuclear materials and waste. Barriers and security fences will prevent access by unauthorized persons. In areas where industrial use by non-DOE entities is permitted, groundwater usage restrictions will be put into place.

1.2.2.1.2 ORNL end states

The proposed future end states for ORNL are waste management, conservation, and industrial use. Projects/subprojects for ORNL will meet these end states.

At completion of the White Oak Creek Remedial Action, the cleanup scope for the Melton Valley area will be complete, except for long-term monitoring and operation of treatment systems. The radioactive waste burial grounds will have been hydrologically isolated to control migration of contaminants. Contaminated sediments in settling basins will have been either removed or stabilized in place. Contaminated soils will have been removed, stabilized in place, or designated as requiring institutional control. Contaminated sediments in White Oak Creek, White Oak Lake, and White Oak Creek Embayment will have been stabilized. The monitoring and injection wells for the hydrofracture operations will have either been plugged with grout to control migration of contaminants or will have been upgraded for long-term use as monitoring wells. Hydrofracture grout sheets (contaminated grout injected approximately 900 ft underground) will be monitored to ensure that contamination does not migrate off-site.

At completion of the White Oak Creek D&D, the Molten Salt Reactor Experiment will have had the fuel salts stabilized/removed, and the contaminated reactor components will have been removed and transported to an on-site waste management facility. The office building and high bay area will have been maintained for potential reuse. All other associated buildings will have been removed to grade, with contaminated material transported to the on-site waste management facility. The Homogenous Reactor Experiment will have been dismantled to grade. Contaminated materials in the below-grade cells will have been removed. Uncontaminated debris will have been grouted into the below grade wells of both the Homogenous Reactor Experiment and the Molten Salt Reactor Experiment. The Old Hydrofracture Facility buildings will have been dismantled and transported to the on-site waste management facility. The Shielded Transfer Tanks will have been decontaminated, dismantled, and sent to an on-site waste management facility.

The current scope of the White Oak Creek NMFS project will be completed in FY 2003. The scope includes management of spent nuclear fuel (SNF) and a total of 51 surplus facilities (either formerly used for isotope production or ranked high in the Surplus Facilities Inventory Assessment). The facilities will exist in a stable, safe condition at minimum surveillance and maintenance (S&M) cost awaiting D&D. All SNF will have been removed from interim storage in Solid Waste Storage Area (SWSA) 5N, the Molten Salt Reactor Experiment, the Bulk Shielding Reactor, and the Tower Shielding Reactor and will have been shipped to Idaho National Engineering Laboratory or Savannah River Site in accordance with the National SNF Programmatic Environmental Impact Statement. Groundwater intrusion problems will have been resolved through the installation of liners in leaking storage wells in SWSA 5N. Facilities completed by NMFS will remain in long-term S&M for the planning period. D&D of these facilities will occur in a future project not yet defined.

At completion of the Bethel Valley Remedial Action, the current cleanup scope for the Bethel Valley area will be complete, except for long-term monitoring and operation of treatment systems. The mercury-contaminated soils will have been excavated and treated by acid washing to remove the mercury, followed by transport to an on-site waste management facility. Additional areas of radioactively contaminated soil and inactive, contaminated pipelines will either have been removed or

stabilized in place. Sludges will have been removed from the Gunit tanks and the tank shells filled with grout. Other inactive tanks will have been removed or stabilized in place. Surface impoundment sediments will have been isolated in a consolidation cell constructed at the current location of one of the impoundments. White Oak Creek floodplain soils and sediments will have been stabilized in place as necessary to meet water quality standards. The migration of the Core Hole 8 contaminated groundwater plume will have been retarded. Radioactive waste burial grounds will have been hydrologically isolated to control migration of contaminants. The area will require long-term institutional control operation of treatment systems and residual contamination.

At the completion of the Bethel Valley D&D, the Fission Product Pilot Plant and the High-Level Chemical Development Laboratory will have been dismantled and transported to the on-site waste management facility. The following facilities will have been dismantled to grade, with contaminated materials transported to the on-site waste management facility and uncontaminated debris grouted into the below grade areas of the ORR: Oak Ridge Research Reactor, Low-Intensity Test Reactor, auxiliary buildings associated with the two reactors, and the Metal Recovery Facility. The core of the ORNL Graphite Reactor will have been removed and the outer shell and most of the building and facility preserved as a registered National Historic Landmark. Equipment in the inactive cells in the Fission Product Development Laboratory will have been removed for disposal and the cells decontaminated and returned to the owner of the remainder of the building. The area will require long-term institutional control because of residual contamination stabilized in place. Active ORNL operations will continue in the Bethel Valley Area.

1.2.2.1.3 East Tennessee Technology Park end states

The proposed future use for ETTP is for industrial facilities to be leased to private industry while some waste management activities continue on site. The project and subprojects for ETTP will meet these end states. The proposed end state for most of ETTP is industrial. Access to some areas containing classified wastes will be controlled with barriers and security fences. Long-term monitoring will be required. In areas where industrial use is permitted by non-DOE entities, groundwater usage will be restricted. Contaminated soils will be either excavated or restricted. The gaseous diffusion process equipment will have been removed, and three of the five most contaminated process buildings will have been demolished to grade and the building rubble disposed of in the buildings' basements. The two remaining process buildings and the centrifuge facility are expected to be decontaminated for potential reuse.

1.2.2.1.4 ORR off-site end states

The eight release sites in this grouping are either bodies of water [i.e., waters of the state (some regulated by the Tennessee Valley Authority or the Corps of Engineers)] or privately owned businesses (some on the State of Tennessee Superfund list). Results from continued monitoring of conditions in the Clinch River/Poplar Creek/Watts Bar system will determine if the dredging restrictions and fish consumption advisories can be lifted in the future. The same caveat applies to the removal of warning signs posted along Lower East Fork Poplar Creek. The lag time for recovery of the ecosystem in these bodies of water will require a "Recreational with Restrictions" land use classification for many years. The Atomic City Auto Parts and David Witherspoon, Inc., sites are currently industrial and are State

of Tennessee Superfund sites. The Tennessee Department of Environment and Conservation (TDEC) Division of Superfund will determine the end state.

1.2.2.2 PGDP End States

Mixed industrial/recreational is the future use scenario for Paducah Gaseous Diffusion Plant (PGDP). For the \$6B Case, the end state for PGDP will be reached in FY 2010. The final end state for PGDP is assumed to be long-term S&M with institutional controls. This condition is expected because of the existence of several on-site waste management units, such as landfills or burial grounds, that will be closed or remediated with waste or contamination remaining in place. Kentucky regulations require a postclosure groundwater monitoring and care period of 30 years. Many of the wastes that will remain in place at PGDP are long-half-life radionuclides, so a longer monitoring period will be required. For areas where contamination remains in place, 5-year reviews of remedial actions will be performed as required by CERCLA.

The enrichment process will continue to operate under U.S. Enrichment Corporation (USEC) control or a successor organization. Reindustrialization or reuse of existing DOE facilities or use of infrastructure is a possibility, with deed restrictions or use limitations applied to areas with contamination remaining in place. The final end state for D&D buildings is the effective cleanup of the contaminated facilities such that free release for reuse is allowed for the dismantlement of facilities that cannot be reused. While this plan does not contain scope for actual D&D activities, preliminary assessments for both C-340 and C-410 facilities indicate that each facility will require dismantlement to level grade, with the potential for remediation of soils underlying each facility.

1.2.2.3 PORTS End States

The future land use patterns at Portsmouth Gaseous Diffusion Plant (PORTS) are assumed to be industrial and recreational. Land use outside the limited access area will be primarily industrial, with recreational use in the on-site creeks. Within the limited access area will be the operational gaseous diffusion plant, with restrictions on selected units, which will be under either postclosure or postremediation monitoring. Areas outside the fence are assumed to be recreational. For the \$6B Case, the end state for PORTS will be reached in FY 2005.

The gaseous diffusion plant remains operational and produces low-enriched uranium for commercial applications under a lease agreement with DOE. The following DOE activities are ongoing until plant operations cease and D&D begins: operation of active and passive groundwater treatment systems, site groundwater monitoring program, long-term S&M of groundwater treatment systems, long-term S&M of remedial action units and D&D facilities, and operation of DOE-EM waste storage facilities on a full-cost-recovery basis to manage DOE nuclear energy wastes generated by plant operations.

1.2.2.4 Weldon Spring End States

Approximately 62 acres of the Chemical Plant Site will be occupied by the disposal cell and appurtenances. The remainder will be released to the appropriate agency (or agencies) for unrestricted

use. The quarry will be released to the appropriate agency for recreational use. For the \$6B Case, the end state for Weldon Spring will be reached in FY 2004.

1.2.2.5 ORR Waste Management End States

The end-state condition for ORR waste currently managed by the EM Program is a steady-state condition in which new waste is stored for the sole purpose of accumulating sufficient quantities to facilitate treatment, disposal, or recycle. For on-site-generated waste, the accumulation time will not exceed 1 year from generation. For new waste entering the site, the accumulation time will not exceed 1 year from the waste transfer. The steady-state condition for waste management is also characterized by a financial and management responsibility for newly generated waste being totally transferred from the EM Program to the waste generators. This steady-state condition also represents a completion of the EM Program mission for waste management on the ORR.

The management of hazardous and sanitary/industrial waste is currently at the end state. No legacy hazardous or sanitary/industrial waste is stored in inventory. Furthermore, there is no out-of-state hazardous or sanitary/industrial waste targeted for the ORR.

At the \$6B Case, the end state for transuranic (TRU) waste is targeted to be achieved by FY 2006, with the completion of treatment of the mixed and nonmixed TRU waste by the private sector and disposal of the treated waste at the Waste Isolation Pilot Plant. This end state target year meets the requirements of the State of Tennessee Commissioner's Order Site Treatment Plan (STP) under the Federal Facilities Compliance Act of 1992 for RCRA Land Disposal Restrictions of 1984 waste.

For the \$6B Case, the end state for mixed low-level waste (MLLW) is targeted to be achieved by FY 2008, with the completion of RCRA and PCB waste treatment and disposal by the private sector. This end state target year meets the requirements of the State of Tennessee Commissioner's Order STP under the Federal Facilities Compliance Act of 1992 for RCRA Land Disposal Restrictions waste. Similarly, this end state target year also meets the requirements of the ORR-PCB Federal Facility Compliance Agreement (FFCA) for PCB-rad waste under the Toxic Substances Control Act (TSCA).

The end state for low-level waste is targeted to be achieved by FY 2010.

1.3 ACCELERATING CLEANUP SCOPE

The scope of the ORO EM Program for the sites listed in Table 1.1 includes:

- ER projects to protect human health and the environment by addressing buried wastes, contaminated soil, groundwater, surface water, structures, and other material at the EM sites;
- waste management operations to store, treat, and dispose of waste in a safe, secure, and compliant manner;

- NMFS activities that implement the orderly transition of contaminated installations and facilities from other departmental program organizations, such as Defense Programs, to the EM Program and that manage SNF; and
- landlord and infrastructure responsibilities at ETTP.

The sites across the nation included in the Formerly Utilized Sites Remedial Action Program managed by DOE-ORO are not part of the Discussion Draft but are covered separately in an ACP specifically for those sites. Not included in the Oak Ridge Discussion Draft are sites under the Hazardous Waste Remedial Action Program support to DOE-Headquarters (DOE-HQ) and national programs, including the Office of Science and Technology, Transportation, Analytical Laboratory, and Emergency Preparedness programs.

Also not included are facilities within Oak Ridge currently managed by other DOE programs—such as defense programs, Energy Research, and Nuclear Energy—and the facilities leased at PORTS and PGDP to USEC. (Specifically, these are facilities from the Y-12 Plant “footprint reduction;” D&D of reindustrialized facilities at ETTP; inactive facilities not in the EM Program at ORNL, PORTS, PGDP, the Y-12 Plant, and the Oak Ridge Institute for Science and Education; nuclear energy facilities at PGDP; and subsidiary USEC facilities.) A Baseline Change Proposal will be prepared as the need for stabilization and D&D of these facilities arises and they are transferred to the EM Program.

The specific projects/subprojects and their associated scopes necessary to accomplish this plan are included in Appendix A. Further remediation subproject details, along with their associated release sites, are shown in the Management Action Process documents.

Under this plan, work scope has been accelerated as a result of management and productivity goals. Consequently, much more work is planned for completion by 2006 than in the BEMR.

On the ORR, legacy TRU waste will be treated and ready for final off-site shipments by 2006. Legacy MLLW treatment will be complete, except for 1013 m³, and legacy low-level waste 44% disposed. The watershed RODs and all assessments of release sites will be complete. Remedial actions will be complete on 262 of 314 release sites. D&D of 137 of 201 facilities will be complete. Usable facilities at ETTP will be leased, and all unusable buildings will be demolished or stabilized as necessary to abandon in-place (except for three process buildings).

At PGDP and PORTS, all legacy waste will be shipped off site for disposal by FY 2006 (except for some TRU waste at PGDP). Assessments and agency-required remedial actions will be complete at Portsmouth. At Paducah, all immediate-risk remedial actions will be complete and all hot spots and suspected sources of off-site contamination remediated. Weldon Spring will be complete.

This plan includes a cumulative, average, enhanced-performance (efficiency) of 33%. This cumulative-average efficiency has several components, representing efficiencies from across the program. Specific efficiency examples include the following:

- **decreased remedial action S&M estimates of 5% per year and D&D S&M estimates of 10% per year through FY 2000**, achieved by (1) reducing the number of surveillances, (2) adding access controls, and (3) decreasing the S&M scope;
- **decreased program management costs**, achieved by reducing scope and creating efficiencies through outsourcing and more efficient organization;
- **decreased landlord costs**, achieved through outsourcing and a reduction in general-use facilities and utility systems (through abandonment in place);
- **decreased project costs**, achieved by adopting an M&I approach using industry standards for remediation work (use of private-industry percentages for design and construction management greatly decreased the estimate);
- **decreased construction costs of 10%**, achieved through increased use of competition and subcontractors to provide support (e.g., health and safety) instead of the management and operating (M&O) contractors;
- **decreased waste management costs**, achieved by incentivization of work scope; and
- **decreased low-level- and mixed-waste storage tasks by 2% per year**, achieved through declining inventory.

Additional savings embedded in the plan but not included in the minimum 33% cumulative-average efficiency are the following:

- ETTP reindustrialization,
- new remediation strategies,
- cost reduction support, and
- technology development.

These activities represent an additional life-cycle savings in excess of \$3.5 B from previous planning baselines.

1.4 PROGRAM ASSUMPTIONS

The major assumptions for the EM Program are shown in Appendix B for the ORR, PGDP, PORTS, and Weldon Spring.

1.5 VARIANCE ANALYSIS FOR THE TWO FUNDING CASES

As previously noted, this Discussion Draft reflects the \$6B funding case. A \$5.5B funding case has also been planned as an alternative. This section presents the variance analysis between the \$6B Case and a \$5.5B Case. Factors evaluated include mortgage reduction, risk reduction, compliance, and acceleration to end state. Figures 1.2 and 1.3 present the funding profiles for the two cases.

1.5.1 Mortgage Reduction

In the \$6B Case, selected projects will be completed on an accelerated schedule. This will result in a significant long-term cost savings through mortgage reduction. The unescalated, undiscounted cost of the \$6B Case is \$305M (35%) less than the \$5.5B Case. The \$6B Case will accelerate completion of remedial actions and D&D projects at the Y-12 Plant, ETTP, and ORNL by as much as 12 years.

Accelerated completion of ORR waste management subprojects in the \$6B Case also results in mortgage reduction. Due to the extended need for waste storage, the increased cost of private-sector treatment, the private sector's prolonged return on investment, and increased support services cost (because of the overall program schedule extension), the \$5.5B Case carries an increased life cycle cost. The waste management program is delayed 4–6 years in the \$5.5B Case, as shown in Table 1.3.

Table 1.3. Comparison of \$6B Case and \$5.5B Case end states

\$6B		\$5.5B	
Waste type	End state	End state	Delay in years
Mixed	FY 2008	FY 2014	6
Low-level waste	FY 2010	FY 2014	4
TRU	FY 2006	FY 2010	4

For Portsmouth waste management, the funding reduction between the two cases causes \$3.6M to be added to the life cycle cost for necessary storage requirements. The estimate did not include maintenance of the X744G facility as a hazardous waste facility. The \$3.6M will increase significantly for this addition.

1.5.2 Risk Reduction

The loss in funding from the \$6B to the \$5.5B level will have a direct impact on risk reduction activities. At a minimum, it will take longer to meet the program's risk reduction goals. At the program level, activities under the \$5.5B Case translate to a 25% decrease in the risk reduction performance measures when compared to the \$6B Case. This comparison of risk reduction performance measures is determined by the application of the Management Evaluation Matrix. The impact of the \$5.5B funding on public safety and health is to decrease risk performance goal for this category by 20%.

A reduced funding profile will decrease the objective risk performance goal for worker safety and health by 25%. It will take 3 additional years to reduce this risk performance measure by 75%. Worker risk is based on the risk to workers if these activities are not carried out; therefore, any reduction in funding will have the direct impact of increasing risk to site workers.

The overall risk reduction goal associated with environmental health is 27% lower in the \$5.5B Case. This decrease is associated with the additional time required to reduce risk with the lower funding profile.

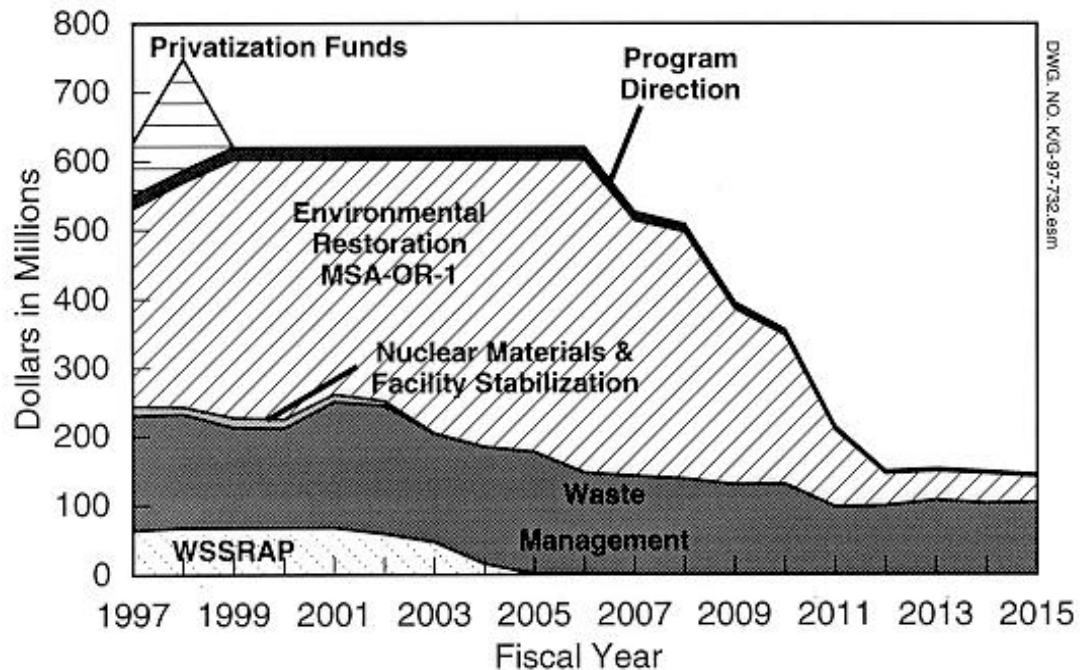
\$6.0B Case Profile (BA)**Total Oak Ridge Less FUSRAP**

Fig. 1.2. \$6B Case funding profile.

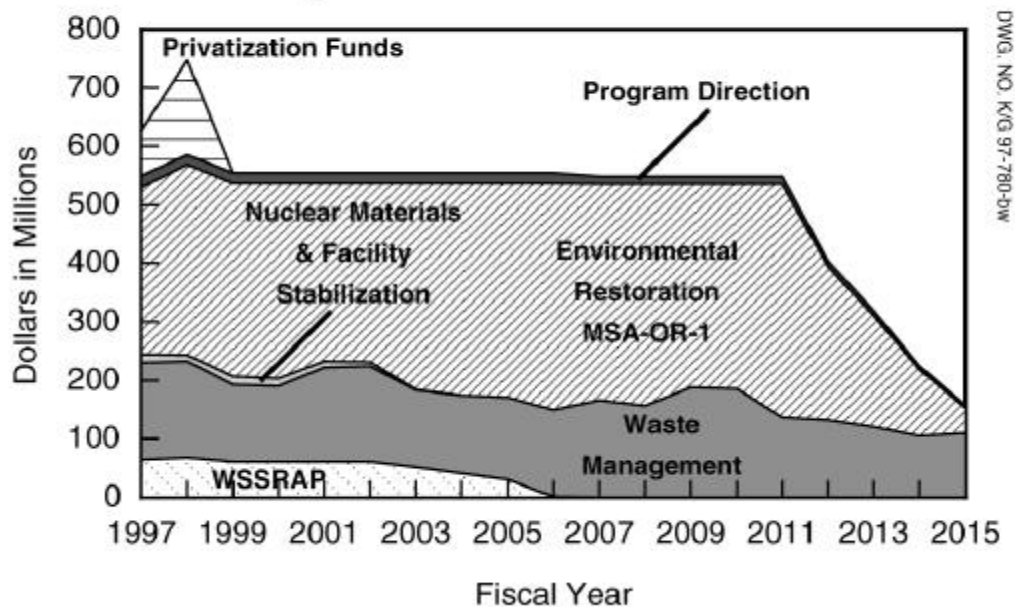
\$5.5B Case Profile (BA)**Total Oak Ridge Less FUSRAP**

Fig. 1.3. \$5.5B Case funding profile.

1.5.3 Compliance

DOE-ORO's intention is to be in full compliance with applicable regulatory requirements. Achievement of compliance at the \$5.5B funding level will require that DOE-ORO successfully integrate unknown and currently undeveloped technologies, efficiencies related to undefined complex-wide integration, more aggressive reengineering initiatives, and significant undefined efficiencies. DOE-ORO will work with the stakeholders, regulators, and contractors to implement such initiatives. DOE-ORO will be able to achieve compliance with all applicable regulatory requirements at the \$6B funding level.

1.5.4 Acceleration to the End State

The end states for the two funding scenarios are the same and are as follows:

- Weldon Springs will be released for unrestricted use, except for approximately 62 acres, which will be occupied by the disposal cell. The disposal cell will require institutional controls.
- PORTS and PGDP will continue to operate gaseous diffusion plants, and remediation will be sufficient for operation to continue. Final remedial action decisions on some units will be deferred until after D&D of the sites at which time further remedial action may be required. Some areas, such as capped burial grounds and groundwater treatment systems, will be subject to long-term postclosure or postremediation institutional controls.
- Approximately 4% of the ORR will require institutional controls following remediation. These areas, such as burial grounds, are being isolated hydrologically. The remaining 96% of the reservation will not require institutional controls and will be available for a wide variety of uses. Legacy waste will be disposed off site.

Impacts of a reduced funding level will result in significant delays in achieving the desired end state at the sites managed by DOE-ORO. Tables 1.4 and 1.5 illustrate the major activities that will be completed before the year 2006 and the activities continuing beyond 2006. Table 1.4 also presents the end date for the \$5.5B Case.

Table 1.4. Summary of funding impacts on end state

Site	\$6 B Case End Date	\$5.5 B Case End Date
ORR	2012	2015
PGDP	2010	2012
PORTS	2005	2006
Weldon Spring	2004	2005

Table 1.5. Major activities

Activity	Completion date (\$6 B Case)	Completion date (\$5.5 B Case)
On-site waste management facility operational	2000	2004
ORR Watershed Records of Decision	2000	2001
PORTS remedial action	2001	2001
Off-site remedial action	2002	2006
Gunitite tanks remedial action	2002	2002
NMFS Program	2003	2003
Weldon Spring remedial action	2004	2005
PORTS waste management	2005	2006
85% reduction in EM footprint at ORR	2000	2003
TRU legacy waste dispositioned	2006	2010
PGDP waste management	2007	2010
Mixed legacy waste dispositioned	2008	2014
ETTP process equipment D&D	2008	2008
Y-12 Plant remedial action	2010	2012
ETTP remedial action	2010	2011
Low-level legacy waste	2010	2014
PGDP remedial action	2010	2012
White Oak Creek remediation	2011	2012
Molten Salt Reactor Experiment D&D	2012	2012
Oak Ridge Research Reactor D&D	2012	2015

2. BUSINESS PLAN

2.1 CONTRACTING STRATEGY

To accomplish the ACP scope, DOE-ORO will use an M&I contractor strategy (excludes Weldon Spring). A performance-based contract for accomplishing the Oak Ridge ACP scope will be awarded to an M&I contractor, with most of the work performed by subcontractors to the M&I contractor. The M&I contractor will use competitive bids awarded on a competitive basis to select subcontractors. The subcontract vehicles may include existing contractual vehicles, or if necessary, new competitive procurements employing fixed-price incentive subcontracts.

2.2 REINDUSTRIALIZATION

Reindustrialization seeks to make available to the private sector underused buildings, facilities, and land through leases and other mechanisms, thereby decreasing the federal presence and the associated costs. Reindustrialization, the preferred method of accomplishment for D&D, is a mortgage reduction effort to accomplish D&D activities through leases in exchange for asset reuse. A joint contractor/DOE-ORO Reindustrialization Task Force was chartered, fully staffed, and organized on October 1, 1996.

The vision for reindustrialization is that by 2006, ETTP will be an active, growing industrial park requiring minimal federal investment for its sustainment. Reindustrialization was established to develop and implement a reuse plan for a full transition from DOE and DOE's prime contractors to the private sector. Reindustrializing the K-25 Site has created ETTP, establishing a multipurpose resource for the region. ETTP will become a national centerpiece for promoting the community and commercial industry's use of DOE's assets and facilities while reducing federal costs.

The Community Reuse Organization of East Tennessee (CROET) is integral to the reindustrialization initiative. In collaboration with CROET, facilities are being displayed to interested private companies. Leases to the private sector involve two steps: DOE leases an underused asset to CROET, which in turn leases the asset to the private sector. CROET, DOE, and the M&I contractor will work together to establish the lease within the guidelines that have been developed for the reindustrialization initiative. Once a lease is established, the private company begins its operational activities under all applicable regulations that govern its industrial operations. Each private company is responsible for knowing about, adhering to, and conforming to industrial requirements of its associated industry without DOE oversight. As of February 17, 1997, four leases have been signed between CROET and private companies. Many other companies are actively seeking space.

A Reindustrialization Implementation Plan is being developed to define a road map for the reindustrialization efforts DOE-ORO will undertake. The plan involves reducing the EM cost and accelerating the completion schedule at ETTP and fosters private sector opportunities and involvement. This plan is intended to be used as a guide for detailed planning and execution of reindustrialization. The governing documents (laws, regulations, and legal agreements) were reviewed for applicability and to provide guidance to the reindustrialization concept. A situation or readiness analysis was

developed as the starting point for where DOE-ORO is today. From this analysis, paths forward are defined. Transition actions and objectives centered around the major goal of privatization are also defined and detailed in the plan.

2.3 TRANSITION OF NEWLY GENERATED WASTE

Management and funding responsibility for newly generated waste will transition back to the generators no later than FY 2000, with the following exception: any remaining legacy TRU waste will transition in FY 2006. This action is a DOE national transition initiative, with the purpose of making waste generators more accountable for the waste they produce, thereby providing incentives for waste reduction and lowering costs for waste management. This action will also allow the EM Program to focus on its primary objective of correcting legacy environmental sites, disposing of legacy waste in the EM inventory, and managing newly generated waste in the interim. Newly generated waste is defined as any waste produced after that transition occurs, whereas legacy waste is waste in EM inventory.

It should be understood that approvals by the Office of Management and Budget are necessary to allow this transition to occur, and at the time of this writing, only pilot studies have been authorized. The Office of Management and Budget is reserving approval of formal transition of responsibility for newly generated waste until the results of pilot studies have been obtained. Furthermore, the timing and substance of the transition of facilities, people, money, and the supporting documentation for the associated internal agreements (memorandums of understanding) and external agreements (contractor, subcontractor, and sub-subcontractor) have not been formalized and are subject to change. Any or all of these components can and will affect both the dollar amounts and the EM and nonenvironmental percentages provided in the PBS. In addition, although contractual and organizational changes may be made to prepare for transition of newly generated waste, funding and management responsibility will remain with EM until the formal transition occurs. Funds to be transferred to the generator are presented in the DOE-ORO EM funding profile until transfer agreements are reached.

2.3.1 Energy Research Program

At the end state, the transition at ORNL will involve the appropriate EM facilities and EM personnel. The end state is assumed to be accomplished by the beginning of FY 2000, with the exception that any remaining legacy TRU waste will transition in FY 2006. The amount of funding necessary to be transferred to the Energy Research Program is expected to be approximately \$31M in FY 2000. If there is any remaining legacy TRU waste, the amount of necessary funding will be transferred to the Energy Research Program to complete the legacy task. It should be noted that a number of these facilities, irrespective of waste type, may be used for both legacy and newly generated waste during the accelerating cleanup time line. Therefore, one program may have to purchase some waste management services from another until the legacy mission in that facility is completed.

2.3.2 Defense Programs

At the end state, the transition at the Y-12 Plant will involve the appropriate EM facilities and personnel. The end state is assumed to be accomplished by the beginning of FY 2000. The amount of

funding necessary to be transferred to defense programs is expected to be approximately \$22M in FY 2000. It should be noted that a number of these facilities, regardless of waste type, may be used for both legacy and newly generated waste during the accelerating cleanup timeframe. Therefore, one program may have to purchase some waste management services from another until the legacy mission in that facility is completed.

2.4 PRIVATIZATION

Privatization is integral to the Oak Ridge approach to achieve more cost-effective operations and complete most of the cleanup activities. Three specific privatization initiatives are key to meeting the commitments of this DOE-ORO Discussion Draft: (1) treatment of TRU waste, (2) treatment and disposal of MLLW through national large-scale procurements, and (3) on-site disposal of CERCLA waste.

Two sources provide funding for these initiatives: privatization provides capital reimbursement for construction of facilities, and the EM Program funds the operation of those facilities. Table 2.1 illustrates the funding levels for the privatization effort. Together, these sources provide the total funding needed to contract with the private sector.

Table 2.1. Oak Ridge privatization contracts accelerating cleanup funding profile

Privatization initiative	Privatization (\$M) ^a capital reimbursements			EM (\$M) program funds	
	FY97	FY98	Total	FY97–FY2006	Total
1. TRU waste treatment	65	77	142	242	384
2. Mixed waste treatment (broad spectrum procurement)	15	-	15	146	161
3. On-site waste management facility	-	85	85	80	165
Total	77	162	239	468	710

^aDollars shown are unescalated and before efficiencies.

Listed below are three privatization projects identified as essential to meeting ACP goals.

1. **TRU waste treatment.** DOE has approximately 700 m³ of remote-handled TRU sludge stored in 21 different tanks at ORNL, 8 of which are located in the Melton Valley area and contain most of the waste sludge. DOE will transfer the remaining sludge to these eight storage tanks for consolidation and treatment. A private company will contract to remove the sludge from the tanks and treat the sludge and Oak Ridge solid TRU waste to meet the Waste Isolation Pilot Plant or Nevada Test Site waste acceptance criteria.

2. **Broad spectrum procurement for MLLW treatment.** Volumes of MLLW at many DOE facilities are small. DOE-ORO has initiated a national procurement for treating and disposing of a “broad spectrum” of MLLW streams. This procurement’s objective is to execute treatment for disposal at privately owned, operated, and permitted commercial facilities.
3. **On-site waste management facility.** Alternatives for disposal of wastes generated by remediation of the ORR are being evaluated under CERCLA. One alternative being considered in the Feasibility Study is the construction and operation of a single, consolidated waste management facility on the reservation. This facility would include a disposal cell, engineered and authorized to accept CERCLA-derived, low-level radioactive waste, RCRA hazardous waste, TSCA waste, and mixed waste consisting of combinations of the previously mentioned categories. Operations waste is not a candidate for disposal in this facility. Figure 2.1 illustrates the privatization project schedule.

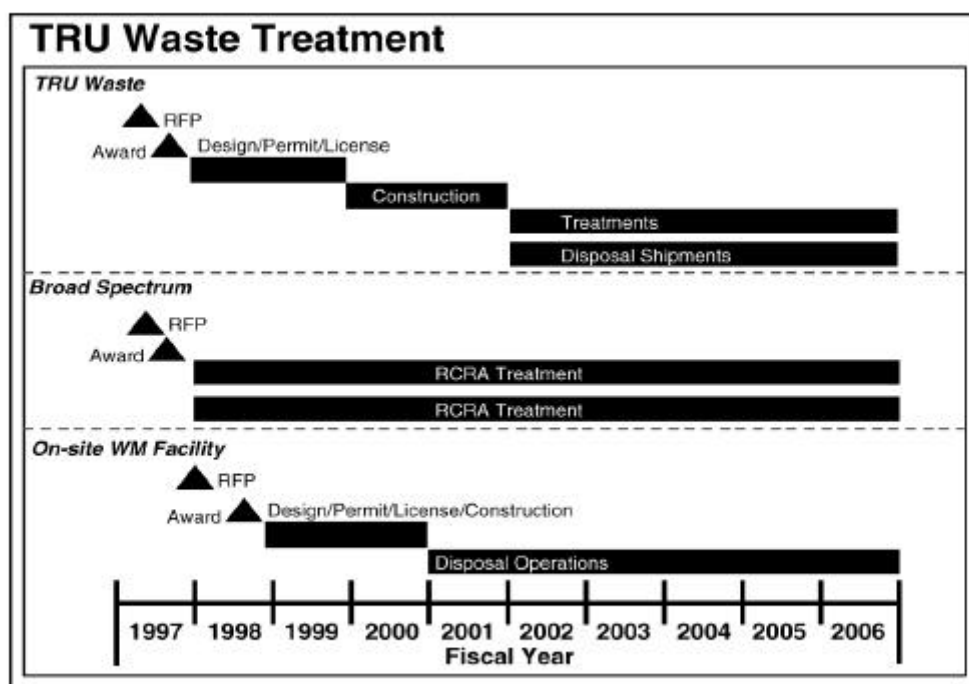


Fig. 2.1. Privatization project schedule.

Contractors awarded the privatization projects will be responsible for obtaining and maintaining, as applicable, the necessary permits and licenses to operate the facilities. Traditionally, DOE has held this responsibility. Success in meeting privatization goals hinges upon the contractor’s ability to work with the State of Tennessee in a timely fashion to meet operational milestones.

2.5 TECHNOLOGY DEVELOPMENT

DOE-ORO EM managers recognize the value of using new technologies to reduce costs and risks, compress schedules, and in some cases, enable implementation of the EM subprojects. Technology gaps and areas for improvement have been assessed; specific technology “opportunities” (development, demonstration, or first application) have been identified and integrated into the subprojects; and cost avoidance and development costs for each opportunity have been projected. The Site Technology Coordination Group has held discussions with program and project managers, project technical leads, and regulators to assess needs and openness to opportunities and to begin integrating alternative technology solutions into project decision-making processes. Strategic planners have assumed deployment of many of the technologies outlined in this section within the level of planning detail to achieve the lower costs and accelerated schedules demanded. Because actual remedies deployed will be determined by the CERCLA Feasibility Study process, other promising technologies have also been retained as options. Table 0.10.1 of the OBS summarizes technology activities for the DOE-ORO sites, including currently unfunded technology opportunities.

2.5.1 Technology and Science Needs

DOE-ORO technology needs have been assessed, updated, and documented in the DOE-ORO Technology Needs Data Base, which can be accessed through the DOE-EM World Wide Web page (<http://www.em.doe.gov>). The needs were prepared by the Site Technology Coordination Group technical subgroups and are presented accordingly. Key site and program/project staff and regulators were involved in the needs assessment process. The needs have been updated as of September 1996 to be consistent with the national Site Technology Coordination Group needs template adopted in June 1996. Basic science needs were assessed during the summer of 1996. Table 0.10.2 in the OBS outlines DOE-ORO science and technology needs linked with EM subprojects.

2.5.2 Opportunities for Science and Technology to Save Costs

Table 0.10.3 in the OBS outlines by technology activity potential cost avoidance for the Discussion Draft. Cost avoidance from technologies already incorporated into program baselines total approximately \$200M. These savings have already been accounted for in the appropriate program baseline summary funding totals. Table 0.10.3 also shows even greater potential savings from technology opportunities not yet incorporated into the baselines. Some of the savings will be realized after the 2006 planning time frame. Additional opportunities may be identified through work with the EM technology focus areas and cross-cutting areas, other sites, other agencies, and industry as planning continues. Table 0.10.4 in the OBS outlines projected development cost, if available, associated with each technology opportunity.

2.6 SUPPORT COSTS

Under Financial Management Systems Improvement Council reporting, contractor support costs show a continued decline and are reflected in the Discussion Draft. Contractor general support costs reflect a company-wide reduction of approximately \$46M from FY 1996 actuals, which is spread across all DOE programs. Along with this overall budget decline, major initiatives that help reduce

the overall support costs include contractor reductions-in-force, contractor services consolidations and reengineering, continued use of incentivized contracting methodology, and major outsourcing of work. The relationship of support costs to total costs for the contractor across all DOE programs is projected to be reduced from the actual FY 1996 relationship of 40% to meet the target Office of Management and Budget goal of 30% by FY 2000. Overhead rates used assume the reductions reflected in contractor support costs.

Escalation rates are assumed to be 2.7% annually for the life cycle of the planning period.

2.7 WORK FORCE REQUIREMENTS AND IMPACTS

2.7.1 Work Force Restructuring

On the basis of projected funding estimates, it is anticipated that the contractor work force for Oak Ridge, PGDP, and PORTS will be significantly reduced with most of the impacted contractor employees leaving the payroll by the end of FY 1998. Table 2.2 portrays the federal and contractor full-time equivalents for FY 1997 through FY 2006. These early reductions are necessary to realign the work force to spend approximately \$150M less in FY 1997 than in FY 1996. Reductions are also anticipated to implement contractor reengineering/outsourcing activities. Many processes are also being evaluated to reduce time and achieve improved quality and services. In conjunction with these initiatives, make-or-buy studies are being performed for many service functions to determine if significant savings would be achieved by outsourcing. There are also plans to privatize some of the service functions. Finally, the change in contracting mechanism from a M&O to an M&I contracting strategy will further reduce the prime contractor payroll. The work force reductions will be accomplished through voluntary and involuntary reductions in force.

2.7.2 Contractor Transition

The plan assumes a change in contracting mechanisms (from M&O to M&I) beginning April 1, 1998, consistent with the current EM Request for Proposal. According to budget guidance provided on January 15, 1997, budget estimates for FY 1998 should include funding for contractor transition, which would include the cost of staff for the new contractor for approximately 3 months. It was determined this cost would be difficult to determine and negligible when compared with the total budget; therefore, these costs have not been considered in this plan.

2.8 PERFORMANCE MEASURES

Adherence to the plan established during the planning process is of utmost importance to DOE-ORO. Project management techniques ensure that projects that are not on schedule and within costs are detected in a timely manner. When schedule and cost variances are indicated, the necessary actions are implemented to correct any deviations from the plan.

Additionally, performance metrics are also used to ensure that the outcomes of the individual projects meet the EM program goals. The performance measures used are those outlined in the PBSs

and SBSs. These metrics include the number of sites that have been remediated; the progress toward that goal; and the volume of waste that has been stored, treated, and disposed. Progress toward meeting these performance measures is assessed semiannually. If deviations from the planned progress are evident, corrective actions are initiated.

Apart from the programmatic performance measurement, contractor performance is measured through the performance evaluation process. EM performance measures and other indicators of performance are used to determine the contractor's attainment of EM goals. This process establishes the accountability and responsibility for completing activities.

Table 2.2. Operations/Field Office Baseline Summary - \$6B Case

Field Offices	1997-2006 Totals	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
ORO federal FTEs	1,369	145	136	136	136	136	136	136	136	136	136
Weldon Spring federal FTEs	66	11	11	11	11	11	11	0	0	0	0
Oak Ridge M&I	18,600	3,300	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
PGDP M&I	1,500	150	150	150	150	150	150	150	150	150	150
PORTS M&I	1,500	150	150	150	150	150	150	150	150	150	150
Weldon Spring contractor	1,407	294	293	254	229	195	142	0	0	0	0

3. SUBPROJECT PRIORITIZATION/SEQUENCING METHODOLOGY

3.1 SUBPROJECT SEQUENCING METHODOLOGY

This section addresses the general process used to sequence DOE-ORO activities to meet the latest budget provisions. To ensure that program priorities are considered, an approach has been developed to determine the order in which subprojects are conducted, based on risk, mortgage reduction, mission, and logical subproject progression. These priorities were the basis of a two-phased sequencing approach. Phase I was a gross-level evaluation to expedite the identification of projects that should be conducted first versus those which could be done later. Phase II was executed at the subproject level and allowed the schedule for the plan to be refined. The process described below also applies to future budget reduction efforts.

Phase I of the sequencing process consisted of a gross screening to allow for the identification of large numbers of subprojects that could be moved far enough outside the 10-year window to reduce the total cost for all scheduled activities below given budget guidelines for each year. This was accomplished by using program priorities to categorize subprojects into one of three groups. Group 1 subprojects are defined as high risk reduction, mortgage reduction, ongoing, and/or tasks that must be completed before other work can proceed. Group 2 subprojects pose a moderate risk reduction and/or fall into the logical order in which work must be conducted. Group 3 subprojects are defined as low-risk reduction for which minimal controls are needed, for which the technology to complete the task is unavailable, and/or that depend on the completion of other activities.

Starting with group 3, the subprojects were moved outside of the accelerating cleanup timeframe, and the cost impact was evaluated. As the cost variance and the number of years for which there was a variance approaches zero, subprojects were moved out individually by risk (lowest risk first). At the conclusion of Phase I, subprojects in group 3 had been moved outside the accelerating cleanup timeframe, and subprojects in group 2 started in approximately 2006. In addition, the sequencing of the group 1 subprojects was completed after the start dates for several subprojects were delayed to bring costs for 1998–2001 in line with the established budget.

Phase II of the sequencing process addresses the need to refine the scheduling of subprojects within groups 2 and 3 as well as to start work sooner if there is a negative variance that allows it. This process entails moving individual subproject start dates to years in which there is available funding based on risk (highest risk reduction first). This process is continued until all projects have been scheduled to start as soon as is feasible based on the logical order of work and budget provisions.

There were several exceptions to the general sequencing process. Subprojects considered essential to operations were exempt from this exercise. This included all base operations, such as DOE Direct. All S&M subprojects were excluded because of the requirement for DOE to continue to control the facilities it manages. Several projects were exempted because of their critical role to reindustrialization or the DOE mission. These include Nuclear Materials and Facility Stabilization Program (EM-60), Process Equipment D&D projects, the Nuclear Criticality Stabilization Program, and Footprint

Reduction. In addition, PORTS and PGDP subprojects were exempt because of state equity issues and agreements made with state and federal regulators.

The following general assumptions were used in the sequencing process: watershed RODs will be approved by FY 2000; on-site waste management facility will be operating by FY 2000, footprint reduction will be completed by FY 2000; privatization budget authority will be additional to the EM Program budget; FY 1997 ER funding profile (revision 2) will meet Federal Facility Agreement (FFA) milestones; and subproject durations or estimates will not be changed by the sequencing team. In addition, waste management activities were not sequenced at the subproject level. The schedule for waste management activities was determined at the PBS level based on compliance drivers (base operations) and the use of available funds to expedite the disposal of legacy waste.

Most of the prioritization information used to support the sequencing of subprojects was taken from the FY 1998 Risk Data Sheet submittal. If any subprojects were not included in the Risk Data Sheet ranking, then the Management Evaluation Matrix [(MEM) see Table 3.1], the same prioritization method used for the Risk Data Sheet submittal, was used to score the new subprojects. All subprojects were evaluated for the following matrix categories: public safety and health, site personnel safety and health, environmental protection, compliance, mission impact, and mortgage reduction. For each category, a severity or impact level (e.g., 1, 2, or 3 for public safety and health) and the likelihood of occurrence (A, B, C, D) are determined to produce the score (e.g., 1A, 2C). The subprojects are given a “before” score (assuming the activity is not conducted) and an “after” score (assuming the activity is completed) for each category. The difference, the risk reduction, for each category is summed providing the total risk reduction score for the subproject. The total risk reduction score is the basis for the relative prioritization of subprojects. The prioritization information pertaining to risk, mission, and mortgage reduction (all categories) was used in Phase I to divide the subprojects into groups. The risk reduction scores for public safety and health, site personnel safety and health, environmental protection were used in Phase II as the basis for determining the start date of individual subprojects (highest risk reduction done first). The prioritized list of subprojects is included in Appendix C.

3.2 RISK INFORMATION IN THE DISCUSSION DRAFT

Risk information is provided in the PBSs for public safety and health, worker safety and health, and environmental health. This information, at the PBS level, is a “roll up” of the subproject prioritization information by year. Because the MEM was revised for the purposes of the Discussion Draft to include addition impact categories for public and environmental health, a “cross walk” was necessary to relate the risk information derived from the original MEM to the new matrix (Table 3.2). For the three risk categories, the old scores were assumed to be appropriate within the context of the new matrix and impact definitions (e.g., 2B = 2B).

The most obvious change resulting from the application of the matrix is in the interpretation of the 1A rank as an “urgent” risk. In the original MEM, a score of 1A was defined as a “high” risk. The current method categorizes risks inconsistently as it inserts a definitive category (urgent) into a system that was designed to portray the relative risk of activities (high, medium, low). In addition, the use of the urgent category is misleading as it indicates that immediate action is necessary to mitigate a critical

situation and leads to the false inference that necessary actions to address “urgent” risks have not been taken. In actuality, it is very unlikely that there are any situations within the DOE complex posing an urgent threat which are not currently managed. At ORO sites, and presumably across the complex, if an urgent situation is identified it is addressed immediately; such quick response actions are not dependent on the planning process. Therefore, it is recommended that future guidance eliminate the urgent category and restore the use of the high, medium, and low relative ranking, as applied in the original MEM. As such, Oak Ridge will not use the urgent category.

The sequencing of activities depends on risk. This ensures subprojects with the highest risk rankings are completed as soon as possible, thereby expediting overall risk reduction. The majority of legacy risk reduction will be completed within the accelerating cleanup timeframe. However, due to the logical sequencing of work that requires the completion of source actions prior to addressing receiving media, the remediation of White Oak Creek sediment and floodplain soils will not be complete by FY 2006. Based on application of the risk assistance guidance, this project would maintain an urgent risk classification until complete (i.e., after 2006). However, it is important to note that for this project, as well as all others that would have urgent risk classification, activities are currently underway to mitigate sources that contribute to the risk. The risk reduction performance measure included in Sect. C.1 of the PBSs gives an indication of the relative decrease in risk associated with the plan.

The “roll up” of the subproject risk information to the project level was based on the method identified in the *EM Center for Risk Excellence Risk Assistance Manual* (February 4, 1997). For each year of the Discussion Draft, the subproject with the highest risk level (impact and likelihood) was chosen for each of the evaluation categories (public safety and health, site personnel safety and health, environmental protection). As subprojects were completed, their “after” scores were used. The process was repeated by choosing the subproject with the highest risk level for the next reporting year. To more adequately represent risk reduction per year, the percent risk reduction is reported in the PBS risk narrative. In addition, the number of subprojects completed each year and the number of release sites associated with those subprojects has been provided. Note that risk reduction is accounted for in the year following subproject completion.

Table 3.1. Management evaluation matrix (MEM)

Impacts	Likelihood of occurrence			
	A 1 yr	B > 1 yr 10 yrs	C > 10 yrs 100 yrs	D > 100 yrs
	Very high	High	Medium	Low
CATEGORY: PUBLIC SAFETY & HEALTH				
(1) PS1. Immediate or eventual loss of life/permanent disability	2500 H	1250 H	625 M	313 M
(2) PS2. Excessive exposure and/or injury	1250 H	625 M	313 M	156 L
(3) PS3. Moderate to low-level exposure	625 M	313 M	156 L	78 L

Table 3.1 (continued)

Impacts	Likelihood of occurrence			
	A 1 yr	B > 1 yr 10 yrs	C > 10 yrs 100 yrs	D > 100 yrs
	Very high	High	Medium	Low
CATEGORY: SITE PERSONNEL SAFETY & HEALTH				
(4) SP1. Catastrophic - Injuries/illnesses involving permanent total disability, chronic or irreversible illnesses, extreme overexposure, or death	1500 H	750 H	375 M	188 M
(5) SP2. Critical - Injuries/illnesses resulting in permanent partial disability or temporary total disability > 3 months, or serious overexposure	750 H	375 M	188 M	94 L
(6) SP3. Marginal - Injuries/illnesses resulting in hospitalization, temporary, reversible illnesses with a variable but limited period of disability of < 3 months, slight overexposure, or exposure near limits (20-100%)	375 M	188 M	94 L	47 L
(7) SP4. Negligible - Injuries/illnesses not resulting in hospitalization, temporary reversible illnesses requiring minor supportive treatment, or exposures below 20% of limits	188 M	94 L	47 L	23 L
CATEGORY: ENVIRONMENTAL PROTECTION				
(8)EN1. Catastrophic damage to the environment (widespread and long-term or irreversible effects)	1500 H	750 H	375 M	188 M
(9)EN2. Significant damage to the environment (widespread and short-term effects, or localized and long-term or irreversible effects)	750 H	375 M	188 M	94 L
(10)EN3. Minor to moderate damage to the environment (localized and short-term effects)	375 M	188 M	94 L	47 L
CATEGORY: COMPLIANCE				
(11)CO1. Major noncompliance with Federal, state, or local laws; Enforcement Actions; or Compliance Agreements significant to ES&H and involving significant potential fines or penalties	1200 H	600 H	300 M	150 M

Table 3.1 (continued)

Impacts	Likelihood of occurrence			
	A 1 yr	B > 1 yr 10 yrs	C > 10 yrs 100 yrs	D > 100 yrs
	Very high	High	Medium	Low
(12)CO2. Major noncompliance with Executive Orders; DOE Orders; or Secretary of Energy Directives (Notices or Guidance Memoranda) significant to ES&H and not involving significant potential fines and penalties	600 H	300 M	150 M	75 L
(13)CO3. Marginal noncompliance with Federal, State, Local Laws; Enforcement Actions; Compliance Agreements; Executive Orders; DOE Orders; or Secretary of Energy Directives significant to ES&H	300 M	150 M	75 L	38 L
(14)CO4. Significant deviation from good management practices	150 M	75 L	38 L	19 L
CATEGORY: MISSION IMPACT				
(15)MI1. Serious negative impact on ability to accomplish major program mission	1500 H	750 H	375 M	188 M
(16)MI2. Moderate negative impact on ability to accomplish major program mission	750 H	375 M	188 M	94 L
CATEGORY: MORTGAGE REDUCTION				
(17)MR1. Significant avoidable cost (today's dollars) due to degraded infrastructure, inefficient management systems or program implementation, accident-related capital loss, or operational expense (annual cost > 1% of annual site EM budget or > \$5M)	1500 H	750 H	375 M	188 M
(18)MR2. Moderate avoidable cost (today's dollars) due to degraded infrastructure, inefficient management systems or program implementation, accident-related capital loss, or operational expense (annual cost .1-1% of annual site EM budget or \$1-5M)	750 H	375 M	188 M	94 L
CATEGORY: SOCIAL/CULTURAL/ECONOMIC				
(19)SO1. Significant adverse: Damage so severe to a social, economic, or cultural value, e.g., a Tribal burial ground, that no mitigation is possible, i.e., the value would be irrevocably lost.	300 H	150 H	75 M	38 M

Table 3.1 (continued)

Impacts	Likelihood of occurrence			
	A 1 yr	B > 1 yr 10 yrs	C > 10 yrs 100 yrs	D > 100 yrs
	Very high	High	Medium	Low
(20)SO ₂ . Moderate adverse: Damage the social/cultural/economic value. Mitigation may be possible, but would involve a considerable investment of time and money.	150 H	75 M	38 M	19 L

Use numbers in () for ORO Scoring ORO Specific Weights

Table 3.2. Discussion Draft management evaluation matrix

		A	B	C	D
LIKELIHOOD - defined as either:	Probability that event (i.e., exposure) occurs within a year, leading to adverse impacts; or	1	< 1; > 0.1	<= 0.1; > 0.01	<= 0.01
	Time until event (i.e., exposure) leading to adverse impacts is expected to occur	< 1 year	>= 1 yr; < 10 yrs	>= 10 yrs; < 100 yrs	>=100 yrs
IMPACTS - Public Safety and Health					
1	Death or injuries/illnesses involving permanent, irreversible effects such as permanent total disability or chronic diseases. Extreme overexposures	Urgent (1A)	High (1B)	Medium (1C)	Medium (1D)
2	Injuries/illnesses involving permanent partial disability or temporary total disability > 3 months, or overexposure	High (2A)	Medium (2B)	Medium (2C)	Low (2D)
3	Injuries/illness that result in temporary, reversible impacts. Disability may be total but of < 3 months duration or small over exposure exceedence	Medium (3A)	Low (3B)	Low (3C)	Low (3D)
4	Injuries/illness that result in partial or temporary reversible impacts or exposures at or below regulatory levels	Low (4A)	NA*	NA	NA
IMPACTS - Worker Safety and Health					
1	Death or injuries or illnesses resulting in permanent total disability, chronic or irreversible illnesses, or extreme overexposure	Urgent (1A)	High (1B)	Medium (1C)	Medium (1D)
2	Injuries or illnesses resulting in permanent partial disability or temporary total disability > 3 months, or serious overexposure	High (2A)	High (2B)	Medium (2C)	Low (2D)
3	Injuries or illnesses resulting in hospitalization, temporary, reversible illnesses with a variable but limited period of disability of < 3 months, or overexposure	Medium (3A)	Medium (3B)	Low (3C)	Low (3D)

4	Injuries or illnesses not resulting in hospitalization, temporary reversible illnesses requiring minor supportive treatment or cumulative exposures above limits that have no lasting effect	NA	NA	NA	NA
IMPACTS - Environmental Health					
1	Catastrophic damage (irreversible loss of unique or sensitive environment, or very poor biological condition, or a wide geographic impact or > 20 years to recovery)	Urgent (1A)	High (1B)	High (1C)	High (1D)
2	Significant damage (poor biological condition, or intermediate geographic impact or 5-20 years to recovery)	High (2A)	High (2B)	Medium (2C)	Medium (2D)
3	Moderate Damage (fair biological condition, or small geographic impact or 2-5 years to recovery)	Medium (3A)	Medium (3B)	Low (3C)	Low (3D)
4	Minor damage (good biological condition, and negligible geographic impact or < 2 years to recovery)	NA	NA	NA	NA

* While “NA” is used in this table to indicate risk levels near background, it may also be used to designate projects unrelated to risk reduction, such as administration, management, or research.

The risk assumptions for the Discussion Draft are as follows:

1. Risk reduction from completion of a subproject was not credited until the year after the funding ended (e.g., if a subproject was completed in 1998, risk reduction was not accounted for until 1999).
2. Many subprojects for waste management activities reached a steady state in year 2011; however, it was assumed that risk remains the same due to the inherent risks of ongoing operations.
3. When recording risk for multiple years (e.g., 2007–2010), the highest risk year was recorded. Risk reduction was captured in the next sequence of years (e.g., if the highest risk for the time period 2007–2010 was in 2007, that risk score was reported for that time period. If the project actually achieved maximum risk reduction in year 2009, this was reflected in 2011–2015).

4. COMPLIANCE

4.1 COMPLIANCE WITH REGULATIONS, AGREEMENTS, AND OTHER REQUIREMENTS

DOE-ORO places a high priority on and is committed to compliance with environmental laws; regulations; agreements; executive orders (e.g., 12850 and 12898); standards; orders; and nuclear safety requirements (including Defense Nuclear Facility Safety Board Recommendation 94-1 commitments) as well as relevant guidance and policies issues by EPA, DOE, or states. Especially important in implementing this plan at each of DOE's facilities are certain environmental laws, specifically CERCLA (including provisions related to natural resource damages) and RCRA and their implementing regulations related to the investigation and remediation of hazardous substances and solid and hazardous wastes. DOE is committed to cleaning up its facilities (including any contaminated surface water, groundwater, soil, air, and buildings) to meet legally applicable or relevant and appropriate environmental standards, either currently specified or subsequently agreed upon, to protect human health and the environment.

The primary drivers for addressing contaminated sites and facilities, including the management of legacy wastes, are found in interagency agreements or consent decrees/orders DOE has with the respective states and EPA. Such agreements/orders are entered into pursuant specific authorities under CERCLA, RCRA, TSCA as amended, executive orders, or state law. They provide a framework for complying with existing laws and regulations and specify the work to be undertaken by DOE to meet the agreed-upon obligations.

The FFA for the ORR between the state of Tennessee, EPA, Region IV, and DOE (effective January 1, 1992) establishes an ER program for assessing and, if necessary, remediating release sites, including certain solid waste management units (SWMUs) identified under the RCRA Hazardous and Solid Waste Amendments (HSWA) permit issued by EPA Region IV (effective October 22, 1986), as well as contaminated facilities/buildings. A schedule and deadlines for the work to be performed under the FFA is contained in Appendix E of the FFA. These commitments may be revised or accelerated for DOE to meet its goals.

Also, other agreements and orders, such as the TSCA PCB FFCA for the ORR (between EPA and DOE, effective December 16, 1996) and the STP included in the State of Tennessee Commissioner's Order (effective October 1995 in satisfaction of the RCRA Federal Facility Compliance Act of 1992), respectively, address PCB waste, PCB gaskets, spills, RCRA hazardous wastes and mixed (RCRA/PCB and radioactive) wastes, some of which are categorized as legacy or ER program waste. Both the STP and the PCB FFCA contain commitments with numerous milestones (some are deferred to the FFA), but these may similarly be revised or accelerated for DOE to meet its goals.

A draft FFA for PGDP establishes an ER program for assessing and, if necessary, remediating release sites, including SWMUs in WAGs identified under the RCRA HSWA permit issued by EPA Region IV, effective August 19, 1991) as well as contaminated facilities. Both the HSWA permit and the FFA contain schedules and deadlines for work to be performed that may be revised or accelerated in order for DOE to meet its goals. Also, a CERCLA §106 Administrative Order by Consent was issued by EPA in November 1988 for addressing off-site contamination (e.g., groundwater plumes), which remains in effect until issuance of the FFA.

In addition, other agreements and orders address PCB gaskets/spills, RCRA hazardous waste, and mixed (RCRA/PCB and radioactive) wastes. These agreements and orders include the TSCA Uranium Enrichment FFCA (between EPA and DOE, effective Feb. 20, 1992); the RCRA Toxicity Characteristic Leaching Procedure (TCLP) FFCA (between EPA and DOE, effective March 26, 1992); and the state of Kentucky Department of Environmental Protection Commissioner's Order (issued in October 1995) including an STP. The STP TCLP FFCA and TSCA Uranium Enrichment FFCA contain commitments with milestones, but these may be revised or accelerated for DOE to meet its goals.

At PORTS, DOE has entered into a Consent Decree with the State of Ohio (August 31, 1989) and an Administrative Order by Consent with EPA Region V (September 27, 1989; revised August 4, 1994) that detail the work that DOE is to perform in addressing and correcting releases from SWMUs on a quadrant-wide basis, closure of hazardous waste management units, and cleanup of the facility in general under RCRA but consistent with CERCLA authorities. Schedules of the work to be performed under existing agreements may be modified or accelerated in order for DOE to meet its goals.

In addition, the TSCA Uranium Enrichment FFCA and a Director of Ohio EPA Final Finding and Order (issued October 4, 1995) requiring development of an STP, respectively address PCB wastes, gaskets/spills, RCRA hazardous wastes, and mixed (RCRA/PCB and radioactive) waste. Both the STP and FFCA contain commitments with milestones that may be revised or accelerated in order for DOE to meet its goals.

4.2 NATIONAL ENVIRONMENTAL POLICY ACT

DOE incorporates National Environmental Policy Act (NEPA) values into CERCLA documents in accordance with the 1994 DOE Secretarial Policy on NEPA. All DOE-ORO CERCLA documents include NEPA values on a sliding-scale approach, consistent with DOE NEPA policy. For non-CERCLA projects—such as those for waste management, operations, or other functions—DOE conducts NEPA reviews and prepares documentation (as necessary) in accordance with Title 10 *Code of Federal Regulations* 1021.

5. STAKEHOLDER INVOLVEMENT STRATEGY

5.1 PURPOSE

This chapter discusses the stakeholder involvement strategy for the Discussion Draft effort. Stakeholders include environmental, civic, and advocacy organizations; individual members of the public; city, state, and county officials; site-specific advisory boards (SSABs) in Oak Ridge and the Paducah Gaseous Diffusion Plant (PGDP); and state and federal regulators. For some specific stakeholder actions, regulators will be given early consideration and will be involved in separate activities. Figure 5.1 illustrates the stakeholder involvement process.

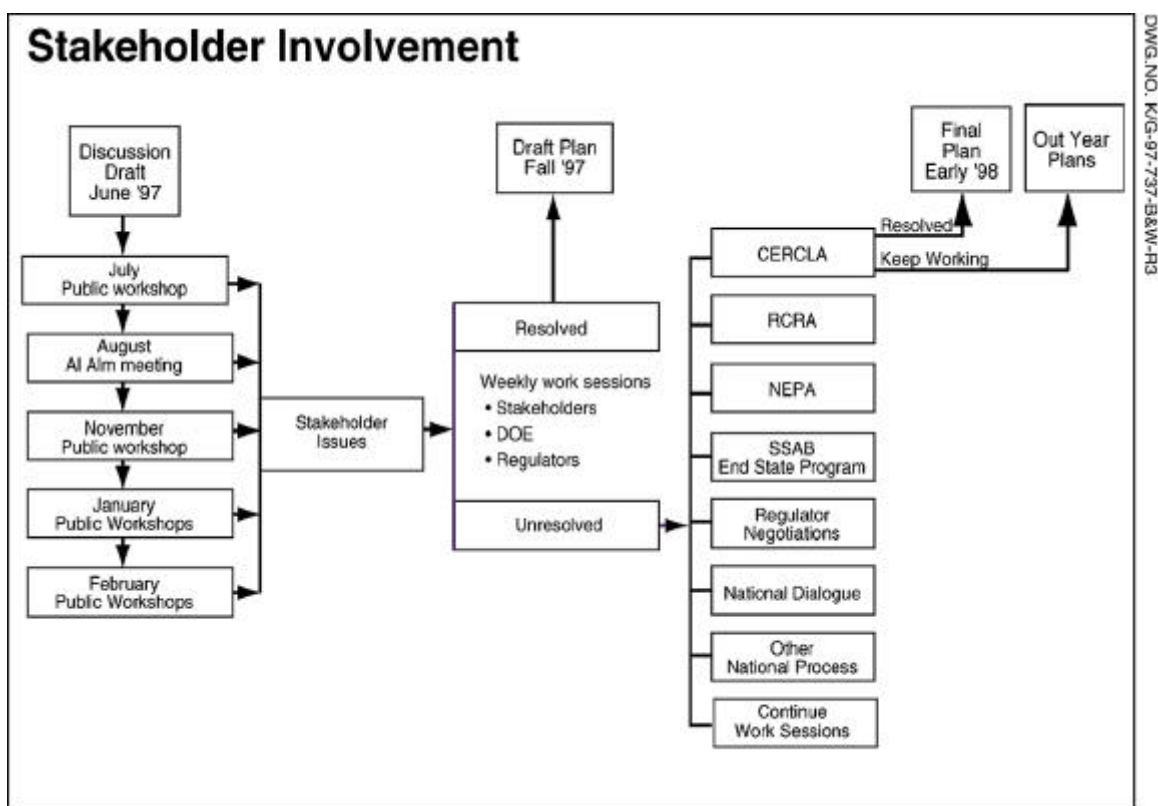


Fig. 5.1. Stakeholder involvement process.

The key events for the stakeholder involvement process are as follows:

- **December 6, 1996—Definition of projects agreed to between DOE-HQ and DOE-ORO.** The list of projects, the current guidance package, and the Oak Ridge stakeholder strategy will be

shared, as available, with stakeholders. They will be made available upon request and placed on World Wide Web pages and in reading rooms.

- **January 10, 1997—Site submittal of initial action and stakeholder involvement plans.**
- **February 28, 1997—Site submittal of Discussion Drafts, draft PBSs, and draft Action Plans to DOE-HQ.** The availability of the PBSs and the Discussion Draft will be announced through direct mail to site mailing lists, paid advertising, public service announcements, World Wide Web pages, and news releases. New and unresolved issues will be worked through the public involvement techniques described for individual sites and programs in subsequent sections of this strategy.
- **June 1997—DOE-HQ release of site and national Discussion Draft to Congress and the public.** Specific plans for public release and review of the site and national plans are being developed by DOE-HQ. DOE-ORO will offer similar opportunities using the announcement mechanisms described above.
- **Fall 1997—Site submittal of the Discussion Draft and final action plans (revised to address public comments).** The availability of the plan will be announced through direct mail to site mailing lists, paid advertising, public service announcements, World Wide Web pages, and news releases. New and unresolved issues will be worked through the public involvement techniques described in the following sections.
- **February 1998—DOE-HQ release of final site and Environmental Management (EM) national Discussion Drafts to Congress and the public.** The availability of the plan will be announced through direct mail to site mailing lists, paid advertising, public service announcements, World Wide Web pages, and press releases. New and unresolved issues will continue to be worked through public involvement techniques described in the following sections.

5.2 ISSUE RESOLUTION PROCESS

DOE-ORO has been conducting public involvement activities on the accelerated cleanup process since early 1996. Public workshops and meetings have been held, as have meetings with regulatory agencies. SSABs in Oak Ridge and PGDP have been involved. Early involvement and additional DOE guidance have resulted in a broad range of planned stakeholder actions to address issues raised. These issues include stakeholder involvement, regulatory flexibility, NEPA coverage, intersite issues, technology development, Discussion Draft marketing, end state/risk reduction, equity, integration, budget, long-term institutional control, pollution prevention, and site programs/mission. The issue resolution process for each site follows.

5.2.1 ORR Issue Resolution Process

Beginning in July 1996, Oak Ridge stakeholders began to express concerns about various aspects of the planning process. These issues have been discussed in two public workshops (in July and November); in writing following a comment period; and at an August meeting with stakeholders and Al Alm, the Assistant Secretary for EM.

To date, DOE-ORO has worked to resolve these issues using a three-pronged approach that includes (1) a series of work sessions with stakeholders, including TDEC, to resolve as many of the issues concerning the assumptions as possible; (2) an end-use working group sponsored by the Oak Ridge EM SSAB (OREMSSAB) to determine acceptable end states for contaminated portions of the ORR; and (3) referral to the National Dialogue of issues of equitable transfer of wastes between Tennessee and other states. More information on these three approaches follows:

1. **Weekly Work Sessions.** Numerous concerns have been expressed about national and local assumptions used in developing the Discussion Draft. At the workshop held in November, stakeholders asked to review planned revisions to all assumptions. This was accomplished through a mailing of the assumptions, a follow-up workshop, and weekly work sessions held in January and February 1997. About 20 stakeholders representing a broad cross-section of interests diligently worked with DOE-ORO and TDEC personnel in this process. Among them were city representatives, activist organizations, the Local Oversight Committee, environmental groups, and members of OREMSSAB.
2. **End-Use Working Group.** The ORR End-Use Working Group has been meeting since February to resolve issues relating to the ultimate uses of contaminated portions of the ORR. Many of these issues were raised in the context of the accelerating cleanup process by the public and in other interactions with the regulators. By May, the working group had developed draft recommendations for the future use of the main plant area at ORNL. The group also began prioritizing the community guidelines it is developing and next will evaluate alternative end uses for WAG 3 at ORNL.
3. **National Dialogue.** Recently, some DOE-ORO stakeholders, including TDEC, have expressed concern over use of the TSCA Incinerator for treating out-of-state wastes. The state has also raised the issue of shipments of contaminated metal to be recycled at Oak Ridge. To the extent possible, these issues appear to be best resolved through the National Dialogue.

In Oak Ridge, public workshops focusing on the accelerated cleanup process were well received among the stakeholders. Workshops addressed planning assumptions, prioritization and sequencing methodology, funding profile, and paths forward to resolve stakeholder concerns. Following are workshop agendas:

- January 9: Present stakeholder strategy.
- January 17: Discuss global assumptions; begin waste management-specific assumptions.
- January 24: Begin environmental restoration-specific assumptions.
- February 4: Complete waste management-specific assumptions.
- February 12: Complete environmental restoration-specific assumptions.
- February 18: Discuss prioritization/sequencing methodology and results.

In addition, a workshop was held January 22-23, 1997, to discuss the EPA's recent administrative reforms for CERCLA and how the reforms affect the Oak Ridge EM Program. The workshop also addressed the end-use decision process, the on-site waste management facility, and the watershed strategy, as well as prioritization and reindustrialization.

Following are planned DOE-ORO stakeholder activities:

- May–June 1997
 - Provide copies of DOE-ORO Discussion Draft and national plans to key stakeholders who have previously participated.
 - Place advertising and a press release announcing the availability of the plan to all stakeholders.
- July 1997
 - Conduct another work session with stakeholders on the DOE-ORO and national plans, and discuss action plans to resolve open issues. At that time, a public participation path forward will be developed to resolve open issues that are not being resolved through either the End-Use Working Group; the National Dialogue; or existing CERCLA, RCRA, or NEPA actions. This discussion could result in additional work sessions similar to those conducted in January and February.
 - Continue End-Use Working Group activities (sponsored by the OREMSSAB).
- August–September 1997
 - Identify any additional open issues upon conclusion of the comment period, and develop action plans for resolution.
 - Conduct a work session to discuss new action plans and an updated public participation approach.
 - Continue End-Use Working Group activities.
- September 1997–February 1998
 - Conduct activities per the revised stakeholder strategy to resolve open issues.
 - Continue End-Use Working Group activities, which conclude with three-site, ORO end-use recommendations. Results will be incorporated into a final accelerated cleanup plan.

5.2.2 PGDP Issue Resolution Process

PGDP will use several approaches to involve its stakeholders. These include briefing stakeholder groups and soliciting comments from them at strategic points during the plan's development; publishing information about the plan in external publications; developing a fact sheet on the plan to be distributed to stakeholders; providing copies of draft documents to key stakeholders for review and comment; and conducting public meetings/availability sessions at key milestones. PGDP has already given an overview of the plan to the SSAB and conducted a general public workshop, where DOE personnel answered stakeholder questions about the plan.

Future plans for PGDP include the following:

- June 1997
 - Provide copies of the draft plan to key stakeholders, including the SSAB, and make the draft plan available through the Environmental Information Center and the Paducah Public Library; advertise its availability in local media.
 - Publish and distribute a site-specific fact sheet on the draft plan.
 - Seek input on the plan from key elected officials, economic development representatives, and environmental groups. (An ongoing effort.)
 - Brief the SSAB on the plan at the June meeting.
 - Begin soliciting and collecting stakeholder comments for consideration and incorporation into the plan. (An ongoing effort throughout the comment period.)
- July 1997
 - Provide an update to the SSAB at the July meeting.
 - Conduct a public workshop or availability session on plan.
- August–December
 - Resolve stakeholder issues developed during the public comment period.
 - Update the SSAB on the progress of plan finalization at scheduled meetings.
 - Provide copies of the final plan to the SSAB and other key stakeholders; make the plan available through the Environmental Information Center and Paducah Public Library; advertise its availability in local news media.
 - Publish and distribute a fact sheet on the final plan.
 - Conduct a public meeting or availability session on the final plan, if deemed appropriate.

5.2.3 PORTS Issue Resolution Process

At the Portsmouth Gaseous Diffusion Plant (PORTS), the initial Discussion Draft was provided in August 1996 for public review at the DOE Environmental Information Center in Waverly. A notice of its availability was mailed to stakeholders, and the plan was discussed during the September 24, 1996, public update meeting on the Portsmouth EM and Enrichment Facilities Program.

On November 6, 1996, DOE-ORO and DOE-PORTS conducted a briefing on the Discussion Draft in Columbus, Ohio, with representatives from the Ohio EPA (OEPA); the Ohio Department of Health; and the U.S. EPA, Region 5. An action was taken from that meeting to schedule follow-up working sessions with the regulators and stakeholders to review the assumptions for the PORTS Ten-Year Plan and come up with an end-state strategy for the site.

A meeting with the regulators was held on February 4, 1997, at the PORTS site. Comments received from OEPA voiced their support of completing remediation at PORTS by FY 2001, but

OEPA does not want funding diverted from the PORTS facility to complete remediation efforts at another site within a 10-year time frame.

A stakeholders' workshop was held February 20 to discuss the Discussion Draft strategy and PORTS assumptions and time frames for completion of remedial actions by 2001 and disposition of waste by 2005. During the stakeholder workshop, attended by 25 people, several community members requested further information on the amount of acreage now available on the DOE reservation for reuse and the projected acreage that will be available once cleanup is completed. The plant union representatives expressed concerns over the proposed "management and integrating" contracting strategy and how subcontracting the majority of cleanup work will impact union employees.

Further discussions will be held to ensure that interested individuals are allowed to participate in planning for overall completion of the remediation program at PORTS and long-term usage of the site.

PORTS Discussion Draft stakeholder involvement activities are as follows:

- August 1996
 - The initial Discussion Draft was provided for review at the DOE Environmental Information Center in Waverly; public notice of its availability was issued through the community relations mailing list and local newspapers.
- September 1996
 - An article about the Discussion Draft was included in the Portsmouth Environmental Bulletin newsletter and sent out to more than 4000 addressees.
- September 1996
 - A report on the PORTS Discussion Draft was made through a poster session at the semiannual public update meeting held at the Vern Riffe Vocational School in Piketon.
- November 1996
 - EM Program officials held a briefing on the PORTS Discussion Draft for OEPA and U.S. EPA officials in Columbus, Ohio.
- February 1997
 - Working sessions were held with OEPA and U.S. EPA representatives (February 4) and with the Portsmouth stakeholders group (February 20) to seek input on the draft plan. A fact sheet was published on the PORTS Discussion Draft and was provided as part of the information packet during the stakeholder workshop.

Scheduled PORTS public involvement activities are as follows:

- June 1997
 - Provide a copy of the Discussion Draft to the Portsmouth Environmental Information Center in Waverly, Ohio.

- Issue a notice of availability in the local newspaper and to the community relations mailing list.
- Continue to provide a fact sheet on PORTS Discussion Draft in the DOE Environmental Information Center.
- Provide a poster session on the Discussion Draft during the June 19, 1997, semiannual public update meeting on the PORTS program.
- July 1997
 - Hold an additional working session with PORTS stakeholders on July 29, 1997, to discuss the updated Discussion Draft, and include stakeholder input for the final plan being prepared for September 1997.
- August–September 1997
 - Hold additional working sessions or public availability sessions with stakeholders and regulators, as necessary; resolve any stakeholder concerns prior to submittal of final plan.
 - Provide a copy of final plan to the Environmental Information Center.
 - Issue a notice of availability in the local newspaper and to the community relations mailing list.
- Long-Term Planning
 - Continue to work with the Southern Ohio Diversification Initiative (Community Reuse Organization) in providing information on any facilities or acreage that becomes available for reuse at the PORTS facility.

5.2.4 Weldon Spring Site Remedial Action Projects Issue Resolution Process

Stakeholders will be informed of the release of the Discussion Draft and the start of the public comment period through advertisements and public notices. The Weldon Spring Site Remedial Action Project will continue to invite stakeholders to meet with site officials. The Weldon Spring Citizens Commission interface will continue.

5.3 COMMENTS

Comments on the National Discussion Draft should be provided to

U.S. Department of Energy
Mr. Gene Schmitt
P.O. Box 44818
Washington, DC 20026-4481
E-mail address: FocusOn2006@EM.DOE.gov
(Call (800) 736-3282 to request a copy of the Discussion Draft)

Comments on the Oak Ridge Discussion Draft should be provided to

U.S. Department of Energy
Ms. Estraletta Green
EW-90
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, TN 37831-8540

6. SAFETY AND HEALTH

DOE-ORO is committed to conducting work efficiently and in a manner that ensures protection of the workers, the public, and the environment. ORO is working to systematically integrate safety into management and work practices at all levels so that the Discussion Draft is accomplished while protecting the public, the worker, and the environment. Safety is broadly defined to include environmental, safety, and health issues. ORO's safety management system establishes a hierarchy of components (see Fig. 6.1) to facilitate the orderly development and implementation of the safety management system for implementation on EM subprojects. The six components of the safety management system include the following:

1. the objective (perform work safely);
2. guiding principles (e.g., line management ownership; clear roles; responsibilities);
3. core functions (e.g., define scope of work, analyze hazards, develop/implement controls, perform work, gather feedback, and seek improvement);
4. mechanisms (e.g., minimize exposures; accident prevention);
5. responsibilities; and
6. implementation.

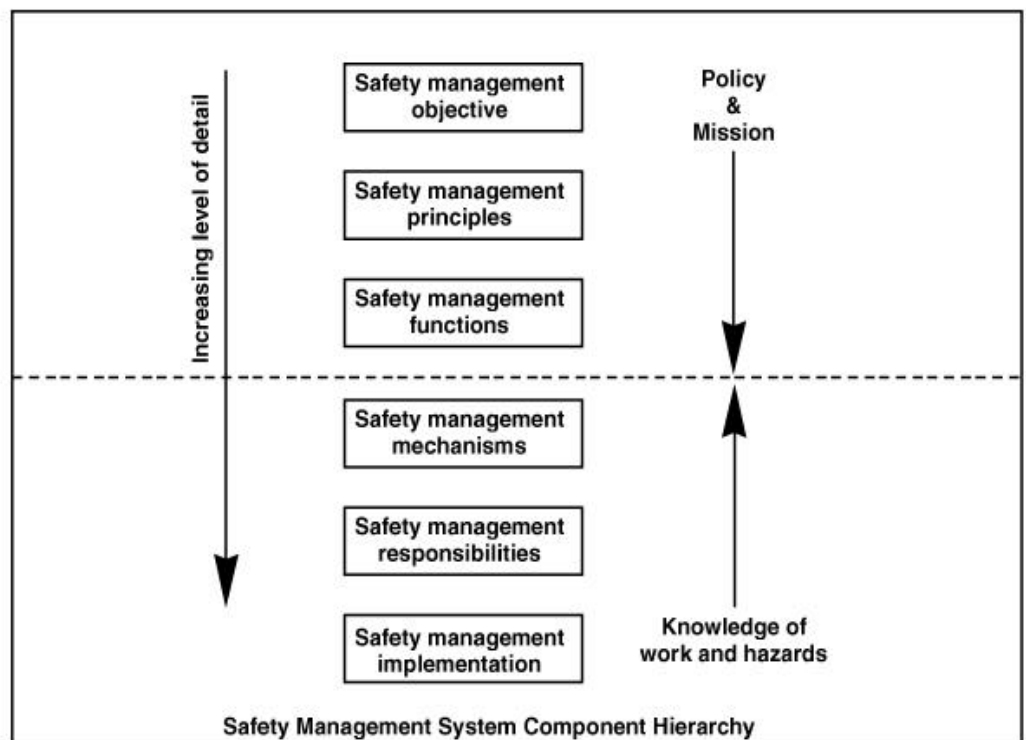


Fig. 6.1. Integrated safety management system.

The objective, guiding principles, and core functions of safety management are defined by DOE. The mechanisms, responsibilities, and implementation components are established for work and are tailored based on the nature and hazard of the work being performed and are defined by the contractors. The implementing guidance upon which the ORO integrated safety management system is built is DOE Policy 450.4, Safety Management System Policy.

ORO's implementation of integrated safety management is taking advantage of existing successful programs and efforts. One example of this is the work smart standards process, which consists of process elements whose focus is on understanding the required work activities and the hazards they pose to the workers, the public, and the environment, then selecting the necessary and sufficient standards to mitigate those hazards. ORO has been a leader in the DOE complex in implementing this tool, as evidenced by the receipt of Vice President Gore's National Performance Review Golden Hammer Award.